



MESH WELDING MACHINES

Modular design for optimum productivity

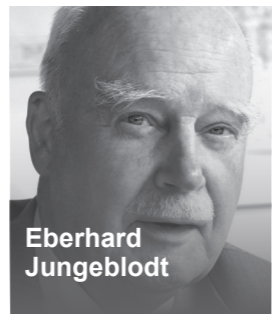




Clemens Jungeblodt sen.



Clemens Jungeblodt



Eberhard Jungeblodt

IDEAL – The Pioneering Spirit of a Medium-Sized Company

In december 1923 the family business was founded - at that time under the name Elektro Apparate Bau GmbH (EAB). After a short time the company name changed and already the first electrical apparatuses were called IDEAL.

The name IDEAL is composed of „Jungeblodt Deutschland Elektro Apparatebau Lippstadt“, but one day the J became the I. In 1970, EAB was officially renamed IDEAL-Werk C.+E. Jungeblodt GmbH+Co. KG. Since then, the name IDEAL has stood for constant innovation and quality in mechanical and plant engineering. The company's core competence is resistance welding. In 2020, Dorothee Jungeblodt and Max Clemens Jungeblodt step down as managing directors and lead the company as third-generation shareholders.

In the same year, Dipl.-Ing. Katrin Goldhahn takes over the management and leads the company with a wealth of knowledge and experience.

The expansion of the European business and the advancement of digitalization - two major and important topics of the strategy, which drives the company under the leadership of Mrs. Goldhahn. Of course, the corporate strategy also includes the topic of sustainability. This means, for example, saving raw materials and using renewable energies. The installation of a photovoltaic system will be successfully completed in 2022.



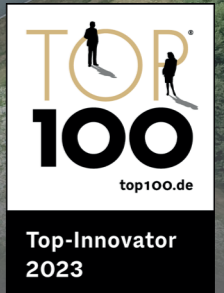
The shareholders:
Dorothee Jungeblodt and
Dipl.-Ing. Max Clemens Jungeblodt



The management:
Dipl.-Ing. Katrin Goldhahn



Top 100 innovator in the 100th anniversary



With welding systems to the Top 100 innovator: With this announcement, the start of the IDEAL anniversary year has been more than successful. After successful participation in the Top 100 Innovation Competition, IDEAL-Werk receives the Top 100 seal. The third-generation family-owned company convinces with its innovative qualities and proves to be one of the hundred most innovative medium-sized companies from Germany.

The competition is based on a scientific selection process. On behalf of compmedia, the organizer of the comparison, innovation expert Prof. Dr. Nikolaus Franke from the Vienna University of Economics and Business Administration and his team examined IDEAL on the basis of more than 100 criteria from five categories:

- Innovation-promoting top management
- Innovation climate
- Innovative processes and organization
- External orientation/open innovation
- Innovation success

The Pioneering Spirit of a Medium-Sized Company IDEAL's product portfolio ranges from welding machines for the joining of wires, wire strands and band saws for wood and metal to wire processing, the manufacture of sheet metal products, and the joining of metal strips.

Our machines range from smaller series production machines up to modular standard configurations and all the way up to custom-designed and customer-oriented special solutions. Our commitment to consistent further development of the product range, as well as competent, problem-oriented consulting have helped us to attain a leading position in the market and made us a reliable partner for the industry. Our knowledgeable representatives in more than 45 countries ensure that we are always close to our customers.

Since 1995 our own sales and service offices in the USA have been directly offering machines and spare parts to our customers in the USA and Canada. In order to meet the requirements of our demanding and international clientele we build upon fair teamwork with customers, suppliers and our employees. Our 180 employees contribute towards the success of IDEAL by way of their commitment, knowledge and close ties to our company. Thanks to our own apprenticeship program and continuous training, we are able to sustain in-depth knowledge and experience.

Your reliable service

We help you quickly and easily with the selection and ordering of spare parts. Provision of spare and wear parts lists for stocking.



Inhouse repairs

When we receive your machine, it will be checked by our IDEAL service technicians and a cost estimate will be prepared:

After approval of the cost estimate, the repair will be carried out.



Maintenance and inspections

For this we can offer you the following:

Maintenance contracts (Our service technicians maintain your machines at your plant)

Installation services (Should a repair still be necessary at your site, we provide a fast and reliable repair service)



Digital remote maintenance

IDEAL can intervene in a supportive manner with remote access in the event of a fault. For this purpose, we recommend digital remote maintenance to our customers.

The use of a router with PLC interface and a CLOUD service is essential so that the IDEAL service technician can connect to the machine.



Assisted Reality audiovisual service from IDEAL

Safe, fast, inexpensive and very close – IDEAL's audio visual service makes machine maintenance child's play and repair a simple exercise.

Downtime is minimised with the Assisted Reality connection. Our customers are supported via mobile phone, tablet or virtual data glasses by our service engineers in the best possible way.

With live audiovisual transmission, our specialists receive detailed information allowing them to swiftly identify problems and to quickly correct them with the aid of instructions and projection.



Upgrades - Retrofit

If your IDEAL machine is getting on in years - we can offer you „upgrades“ for it:

- Control conversion (S7 or also Schneider > Siemens)
- Router with interface (Siemens requirement)
- New stop system (BAS 300 series)
- Thyristor shutdown (series)
- NC underwire feeding (retrofitable to all underwire machines of the type GAM 530)
- Welding control conversion

Our machine talks IDEAL 4.0

Via the internationally known communication medium OPC-UA, we are able to provide all production-relevant and all energy-relevant data of the production infrastructure.

As an option, a „monitoring function“ is possible via WLAN.

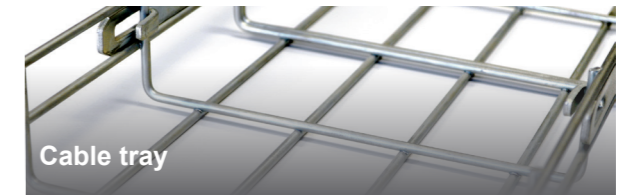


Mesh Welding Machines and Production Lines

The IDEAL Mesh Welding Machines for industrial wire goods are well known in the industry. Leading manufacturers of wire products are using IDEAL machines for the flexible and economical manufacturing of wire mesh products. Our automatic production lines can be used for producing a finished product in a complete run, including: stamping, bending, wire shaping, cropping or other processes that enable our customers to achieve a finished product which is ready for sale at the end of the manufacturing line.

Typische Anwendungen

- Single wire mesh panels
- 3D fences
- Double wire mesh – 2D
- 358 prison mesh
- Temporary fences
- Gabions or stone boxes
- Cable trays
- Wire baskets
- Dish washer baskets and white good products
- Supermarket applications
- Shelves
- Oven and grill roasts
- Animal cages
- Transport and logistic mesh
- Display articles and POS products



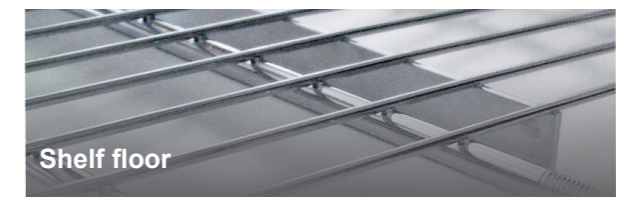
Cable tray



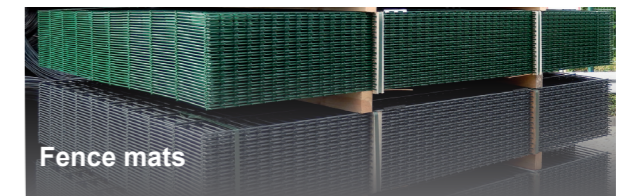
Gabions with double bar



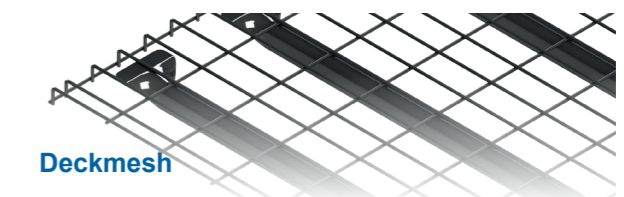
Gabions



Shelf floor



Fence mats



Deckmesh

Technology

Based on the welding target and our customer quality demand, we will be offering a different kind of welding technology to be used in our mesh welding machines. There is the possibility to offer AC current, rectified DC – or medium frequency technology. By concentration on the current or on the welded cross point only, we are producing straight and flat mesh.

Alternating Current AC

Die Netzfrequenz beträgt in der Regel 50 Hz pro Sekunde (in manchen Ländern auch 60 Hz). Dies bedeutet, dass eine Periode 20 Millisekunden entspricht. Aufgrund des hohen Blindstromanteils liegt der Wirkungsgrad bei Wechselstromschweißmaschinen bei ca. 65 %.

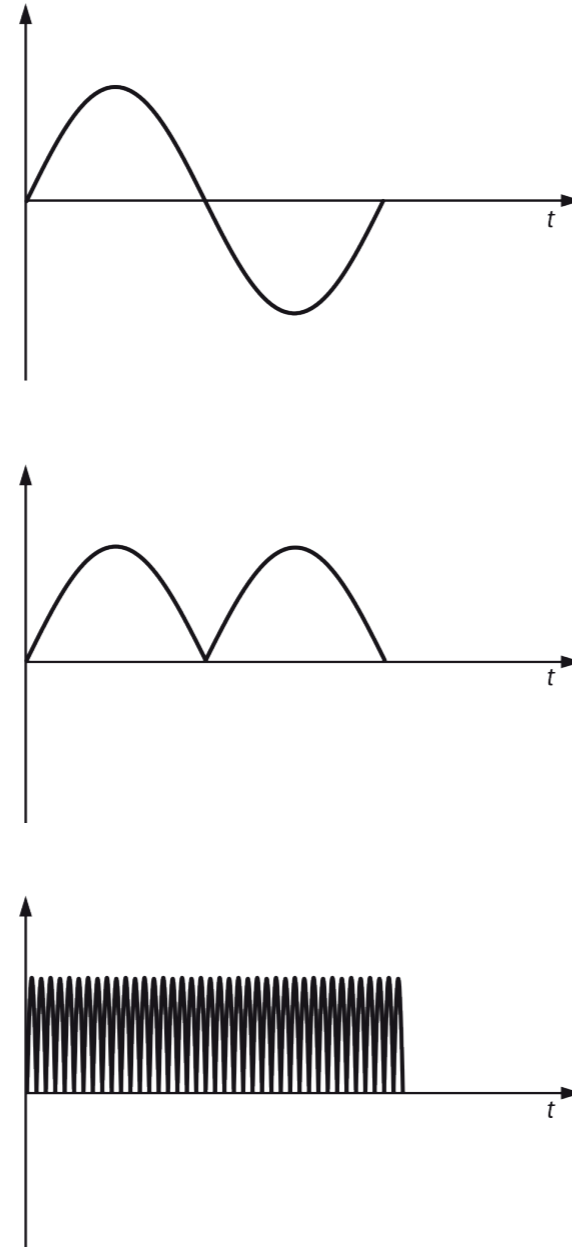
Direct Current (DC)

Durch die Gleichrichtung des Stroms sowie den speziellen Aufbau des Schweißportals, kann der Strom nur in eine Richtung fließen. Bei Gleichstromschweißmaschinen liegt der Wirkungsgrad bei ca. 75 bis zu 85 %. Durch die Direktschweißung werden die Querströme deutlich minimiert (geringere Hitzeeinbringung). Das Resultat sind geringere Schweißströme, kürzere Schweißzeiten sowie höhere Elektrodenstandzeiten.

Medium Frequency

(1000 Hz DC technology)

In the IDEAL Medium Frequency Mesh Welding Machines the welding transformer will be driven at 1000 Hz which is 20 times faster than an AC system with 50 Hz. Due to the high frequency the welding time can be fine-tuned much more precisely. The efficiency degree of a Medium Frequency Machine is between 95 and 98 %. Less heat introduced into the mesh gives a very flat and straight product. Shorter welding time reduces wear and tear and increases the lifetime of the electrodes.



Modular design

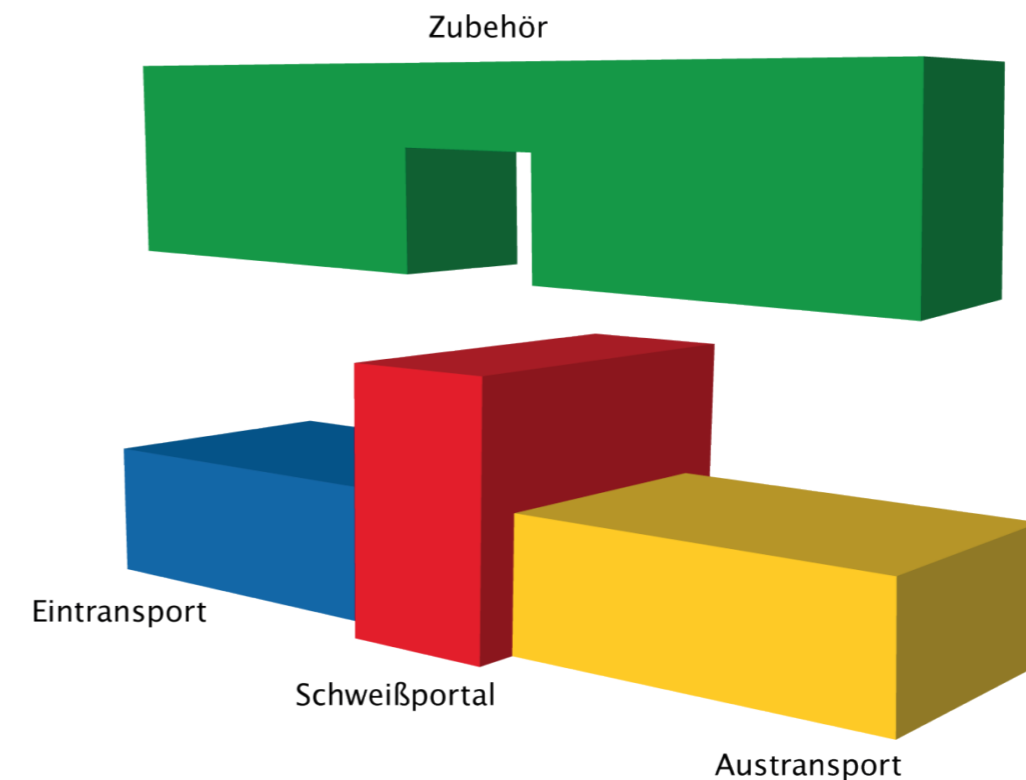
A long experience in welding resistance technology and mesh production, a close cooperation with our customers, the cooperation with colleges/universities and research institutes as well as the feeling for technical trends are the roots in mastering the challenges of the future in a dynamic and innovative manner.

The basis of our development activities is a steady improvement of our well-established standard machines into tailored, individual solutions.

We are driving forward customized solutions based on the demands of our customers. We offer our customers various modular designed series of welding machines, which are producing mesh panels of different types made from straightened and cut-to-length wires.

Here we pay special attention to extra versatility and flexibility of the machines. Easy and quick set-up for product changes make our machines suitable for mass production as well as for medium and smaller quantities.

The production requirements of our customers define the required modules, the expansion stage and the type of automation. Due to our modular machine design, extension or automation can also be added later.



IDEAL Gitterschweiß- maschinen

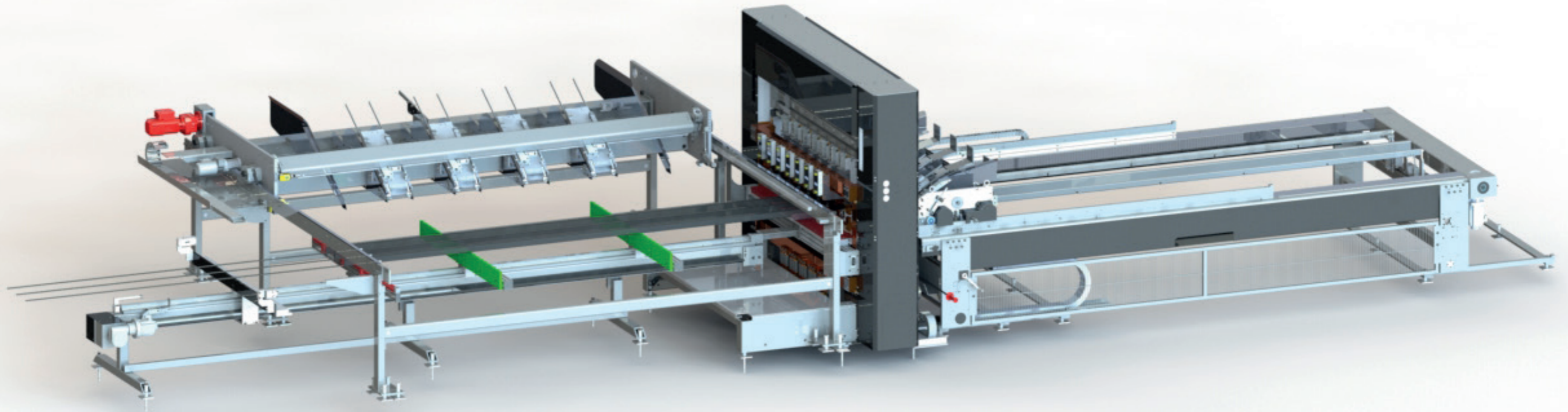
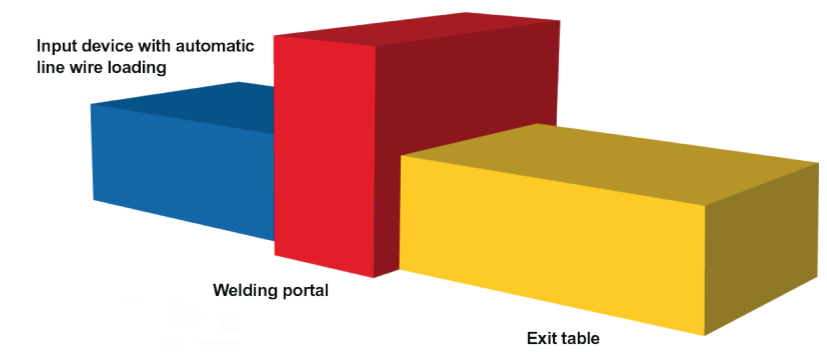
The production requirements of our customers define the specification and required modules. IDEAL is well known for its in-house production and commits to manufacturing in Lippstadt.

As a well-established German, medium-sized company we are producing and installing machines or components, just as expected by our worldwide customers.

Made in Germany
Made in Lippstadt
Made by IDEAL

IDEAL Know-How

- + Design
- + Planning
- + Production
- = Everything out of one Hand!



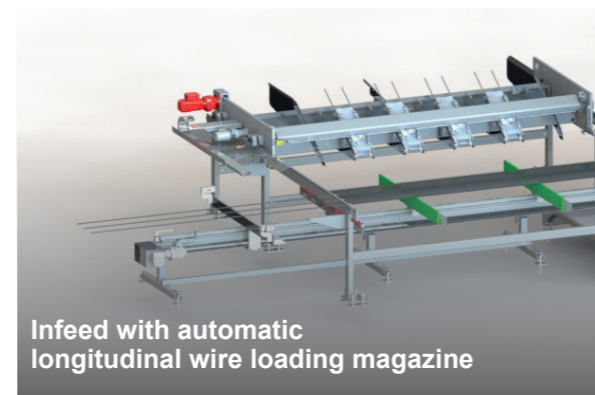
Infeed with automatic longitudinal wire loading magazine

We offer different versions for feeding and loading – from manual insertion to automated loading with magazines for different wire diameters and lengths, integration of straightening and cutting machines and pre-configured changeable guiding rails.

In order to maximize the highest possible utilization of the machine, feeding of new wires is automatically done during the welding process. The magazines will also be loaded while the machine is in operation.

To minimize the downtime, the magazines, as well as the guides are designed for a quick changeover within the welding portal.

The machine can be fed on a single or double track magazine for the minimization of cycle times.



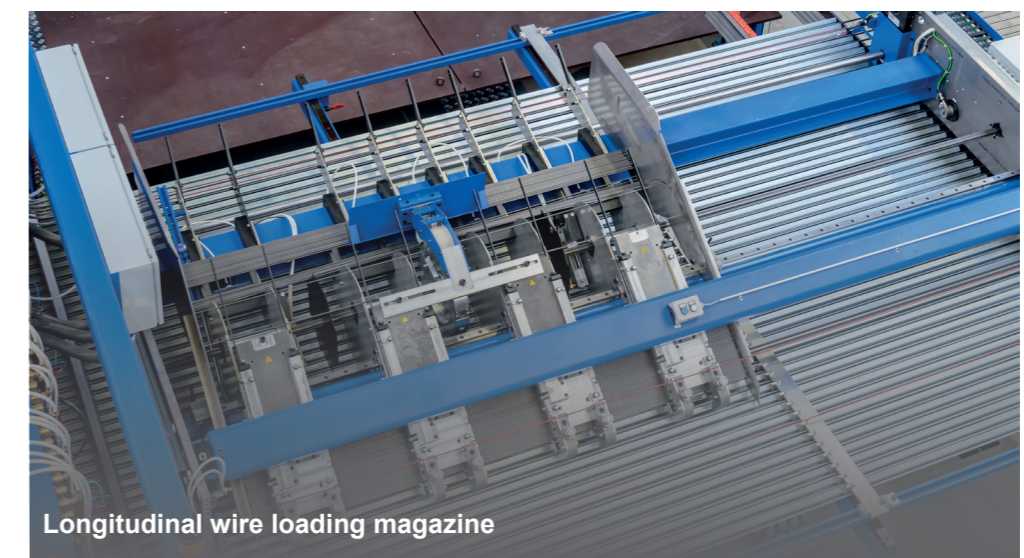
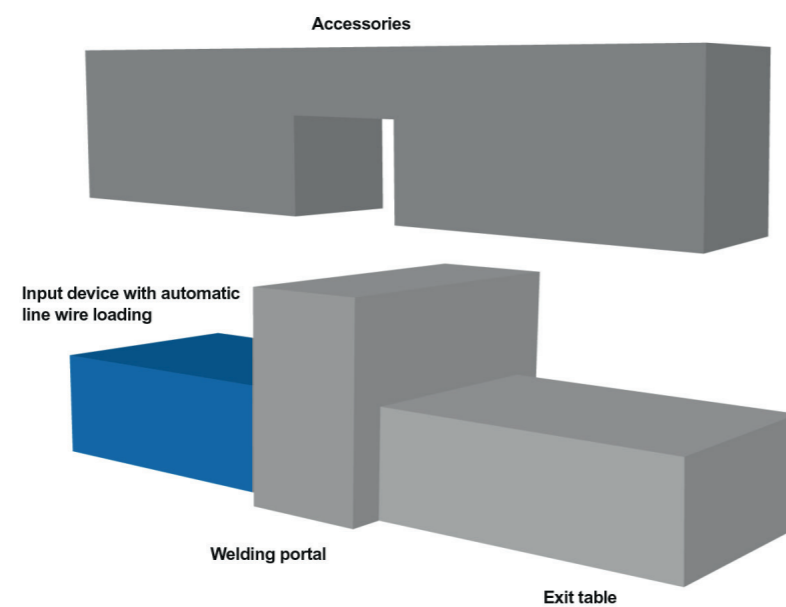
Typical applications clarify the various possibilities for loading. Depending on customer's requirements, the input device can be made in a modular design.

- Manual or automatic feeding of wires, frames, profiles or flat bars
- Quick change-over between different applications



Technical data

- Manual and automatic loading
- Line wires up to 6 000 mm
- Cross wires up to 3 000 mm
- Wire diameter up to 8,0 mm



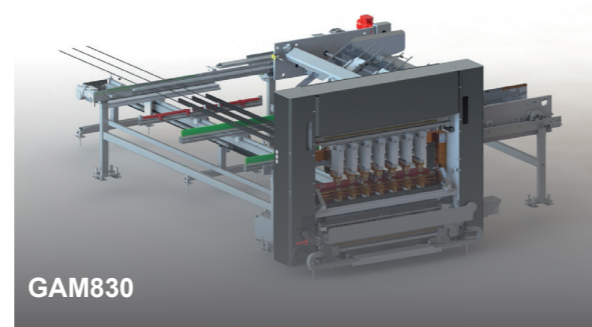
Welding portal

The heart of our mesh welding machine is the welding portal. The cylinders ensure an optimized fixing of the wires – for maximizing the surface quality while simultaneously minimizing welding spatter.

The lateral edges of the mesh can be welded flush or can be trimmed during welding operation – T-welds are also possible.

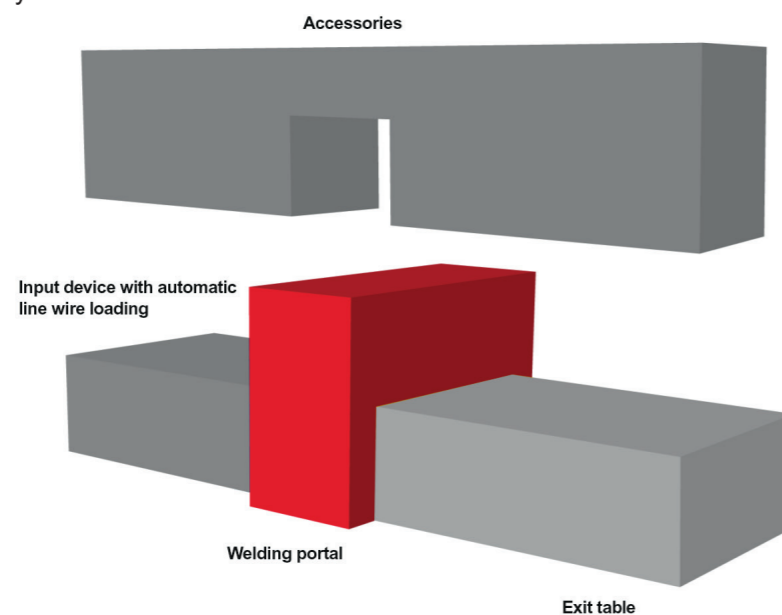
The welding cylinders are designed for a quick changeover. The minimized changeover time ensures high efficiency, versatility and flexibility of IDEAL machines.

Programming of welding parameters is made by means of a PC featuring operator guided and friendly software easy to use. Storing, further processing, evaluation of data and a network integration are provided. Remote maintenance and diagnosis is also available.



Technical data

- Portal widths up to 3 000 mm – special dimensions on request
- Secondary alternating current, direct current or medium frequency
- Welding of meshes with upper and/or lower cross wires
- Single and multiple operation



Welding portal

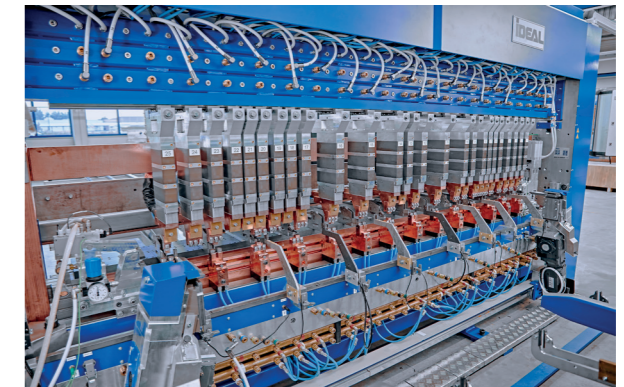
The versions of the IDEAL welding portals are based on customer resolved solutions. The classical types differ within the applications and also in the portal widths.

Depending on customer's request, the welding portal will be equipped with corresponding cylinders, welding presses or transformers. From AC alternating current up to DC medium frequency, every technology is available.



The series 100 exists since more than 10 years and is characterized by quick setting of welding cylinders.

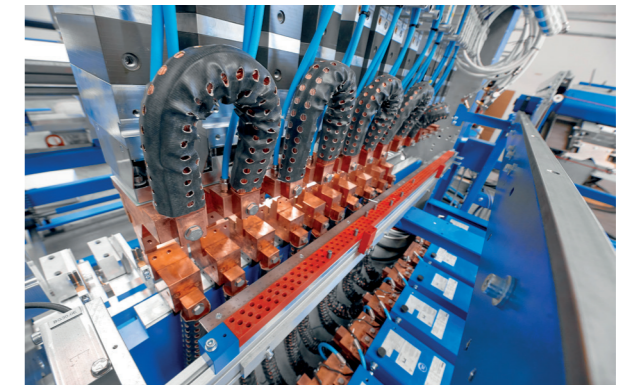
One operator adjusts the welding cylinder with only one manipulation. All welding parameters are set up centrally by software. Thus a product change can also be realized easily and process reliable by an inexperienced operator.



Our GAM solutions are equipped with 1000Hz, middle frequency (MF) technology. The MF makes it possible to regulate the current each single millisecond.

MF produces solid welds, a significantly better surface finish and reduces spatter formation. MF also returns an energy utilization coefficient of over 96%.

Very good welding results can be achieved in the case of galvanized steel, stainless steel and fine wire.



The classic among the welding portals is surely the alternating current version of our series 800. Using different modules, this is a perfect solution for every application.

The picture shows the setting of an alternating current machine. It is important to have a machine, which is easily accessible ensuring user-friendly maintenance of the machines.

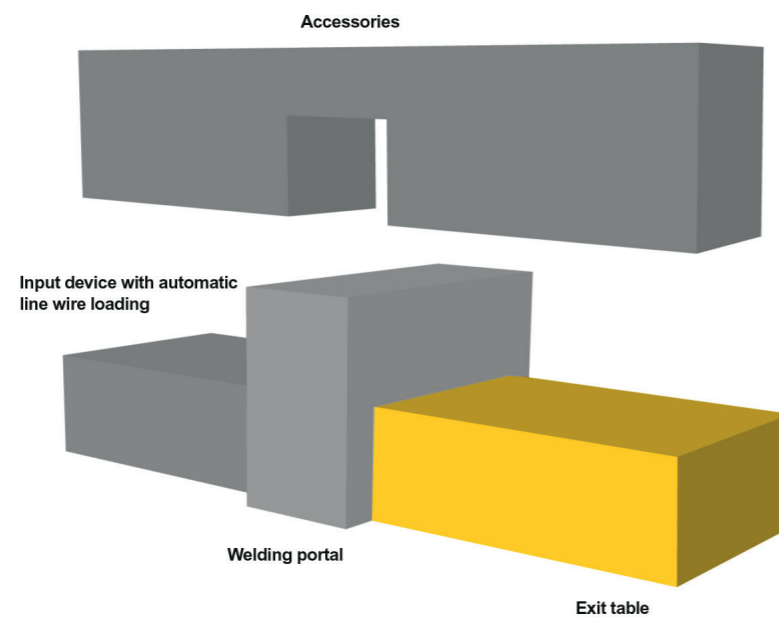
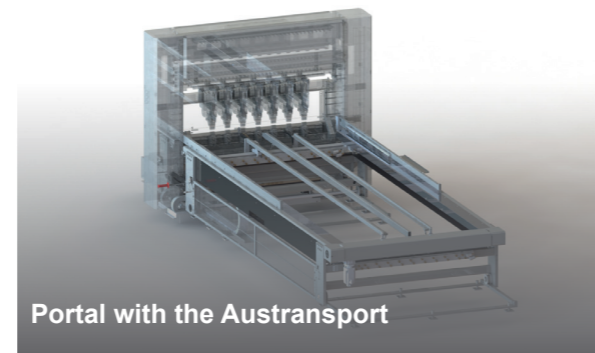
Exit table

We offer the following: manual removal of products, putting down, stacking, turning, automated transport to subsequent processes and integration to a manufacturing line.

It is also possible to split a welded mesh into several individual products – thus an optimized cycle time can be achieved.

Technical data

- Length up to 3 500 mm – special dimensions on request
- Width up to 3 000 mm – special dimensions on request
- Exit of grippers
- Pivoting rails
- Single and multiple operation
- Stacking device without or with turning



Exit table

After welding the mesh panel, a further processing step can be made by unloading. Beside the standard unloading of a mesh, IDEAL further offers a modular system.

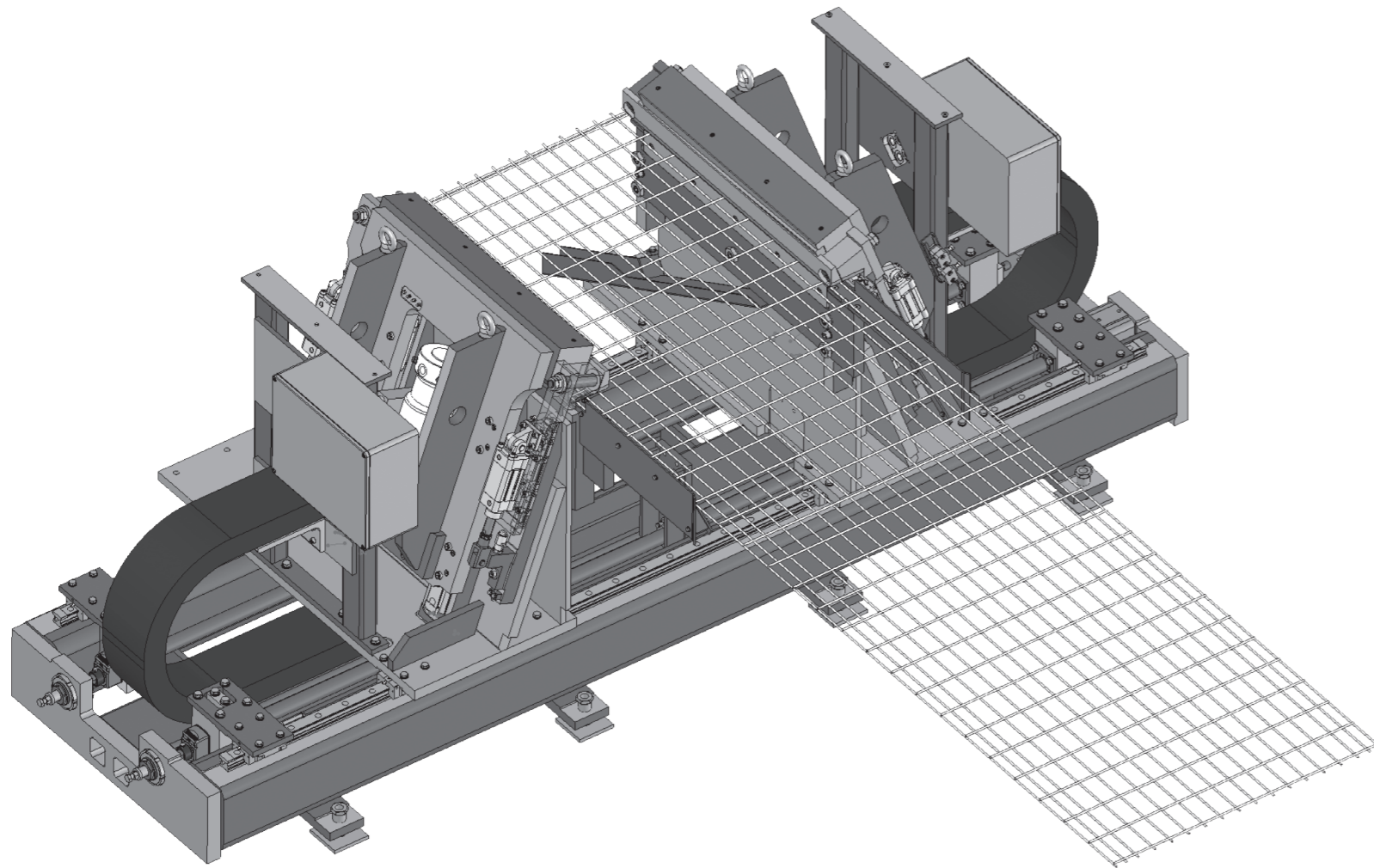
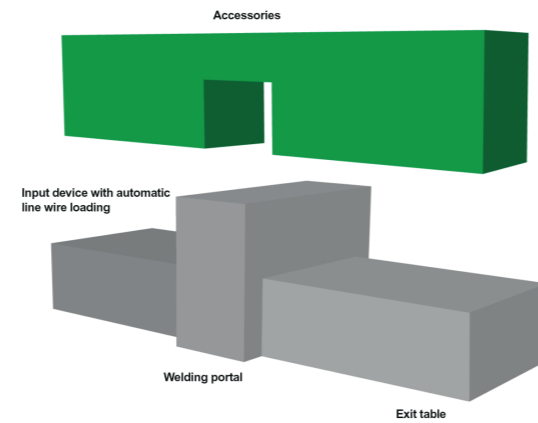
The “run-out” or the so-called “exit table” pulls the mesh out of the portal. It is possible to have an exit table in one, two or triple tracking, which increases the production. Additional modules from our range of accessories will automatize the mesh welding machine even years after the purchase.



Accessoires

The requirements of our customers and the market – in conjunction with product development and innovations – form the basis for the accessories to our mesh welding machines.

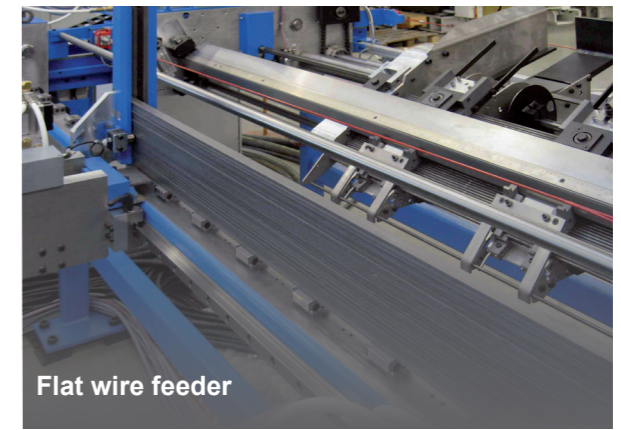
Owing to IDEAL's modular design, machines can be adapted/retrofitted with accessories at a later stage.



Side trimming of industrial grids



Stacking device and mat handling



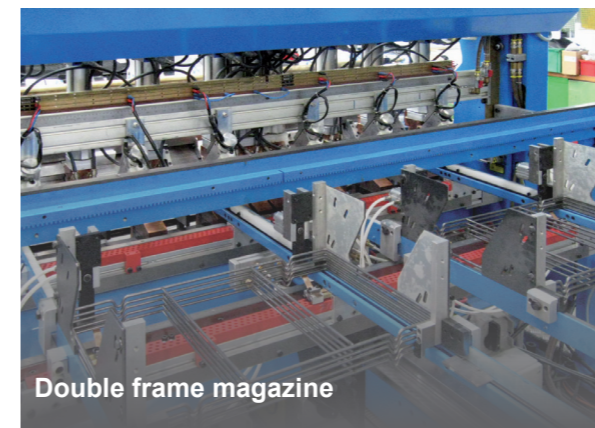
Flat wire feeder



Bending press



Laser based device



Double frame magazine



Nibbler



Infeed for long wires



Side trimming for large series

ONE for ALL!

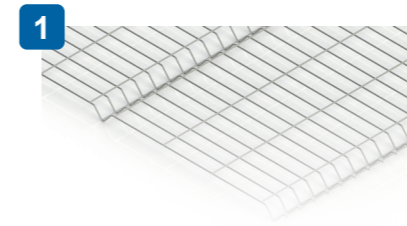
The New IDEAL Fence Production Line is an all-rounder. Because of the modular design of the GA 800 series, there are no limits to the flexibility in production. All fence types on the global market can be produced on one machine. Even a subsequent extension of the machine to expand the product portfolio is no problem because of the modular design. Everything is prepared for an upgrade.

During the development of the GA 800 series, the focus was not only on product diversity, but also on optimising set-up times in order to perfect the advantage of flexibility by minimising set-up times.

From quick set-up cylinders to fully automatic line wire adjustment, everything is possible.



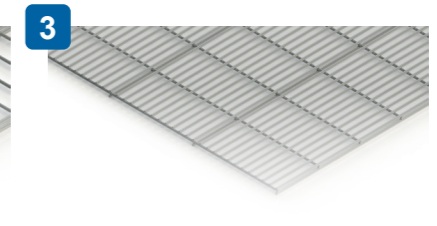
Single bar mat



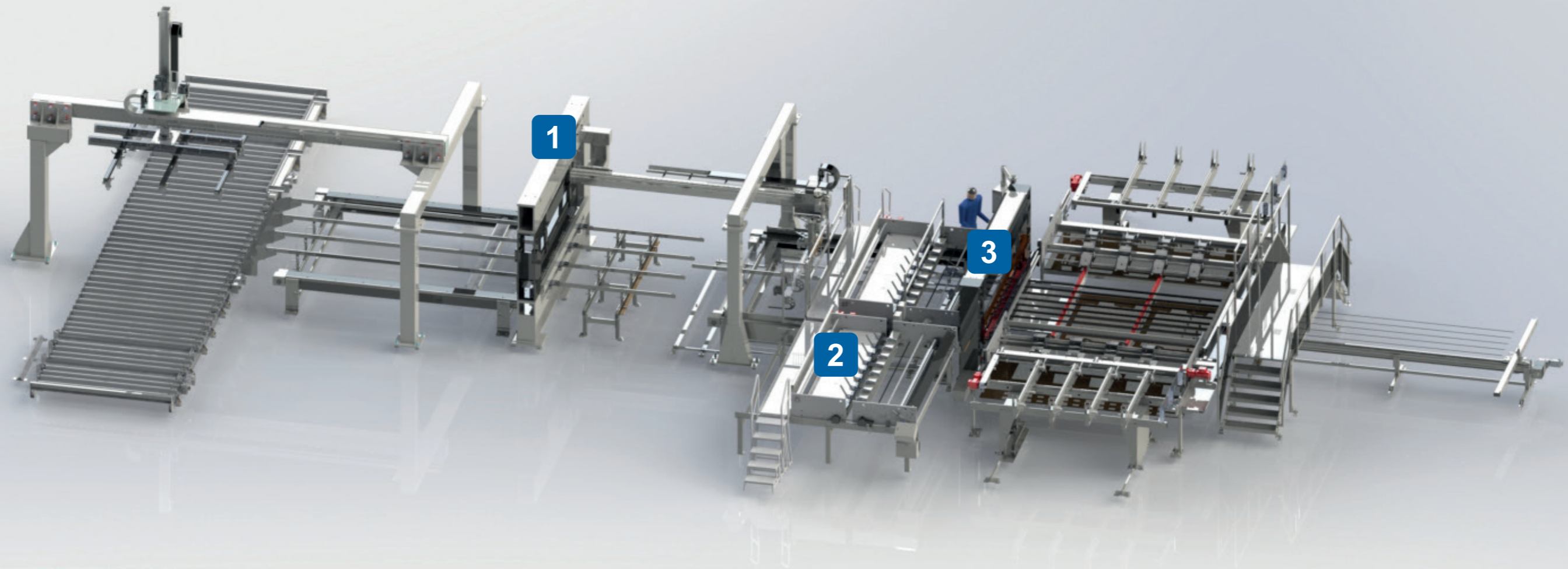
3D fence mat



Double bar mat



Safety mat 3-5-8 with continuous bottom wire





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